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Filed : December 10, 2001

REMARKS

Claims 1, 6, 7, 17, 23-26, 31 and 35-38 have been amended by this paper, and claim 30 has been canceled. New Claims 39-41 have been added and Claims 2-5, 8-16, 18-22, 27-29 and 32-34 remain unchanged by this amendment. Hence, by this paper, Claims 1-29 and 31-41 are presented for further examination.

In the Office Action mailed February 9, 2005 Claims 1, 2 and 38 were rejected under 35 U.S.C. § 102(b) as being anticipated by Gordon (U.S. Patent No. 5,892,577, hereinafter "Gordon").

In reference to Claim 1, Applicant notes that its' features include, among other things:

"providing the optical disc to an optical disc reader, wherein the optical disc includes a first layer which includes a first surface impressed with said optically readable structures which are coated with a first reflective layer and wherein the optical disc includes a second layer having a second surface, a portion of which is coated with a second reflective layer, the first and second surfaces configured such that the analyte is located therebetween; ..."

Applicant respectfully submits that the Gordon reference neither teaches nor suggests such a method, performed in combination with the structure indicated above. The Gordon reference teaches a system and method for conducting an optical inspection of a biological, chemical, or biochemical sample supported by an optical transparent disc. However, there is neither any teaching nor suggestion in Gordon of an optical disc which includes first and second layers that are configured as defined in Claim 1. Furthermore, Gordon neither teaches nor suggests the method associated with the disc, including at least the steps of:

"acquiring radiation returned from the first and second reflective layers ...;
generating from radiation acquired from the second reflective layer at least one analyte signal that is indicative of the presence of the analyte; and
generating from radiation acquired from the first reflective layer operational signals which enable the optical disc reader to track said optically readable structures."

Applicant submits that, in view of the features set forth in Claim 1, including those described above, Claim 1 defines subject matter which is patentable over the Gordon reference. Furthermore, Applicant respectfully submits that none of the prior art of record, taken alone or in

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combination, either teaches or makes obvious the subject matter of Claim 1. Applicant also submits that since Claim 2 depends from Claim 1, that dependent Claim 2 also defines subject matter which is patentable over the art of record.

Claim 38, as presented herein, defines an optical disc assembly comprising, among other things, optically readable structures which have encoded focus control information for an optical disc reader. Applicant respectfully submits that Gordon neither teaches nor suggests such a feature, in combination with the elements as set forth in Claim 38. Accordingly, Applicant respectfully submits that Claim 38 also defines subject matter which is patentable over the art of record.

In the Office Action mailed February 9, 2005, Claims 3-5, 7-16, 19-22, 24 and 37 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gordon in view of Idemitsu Petrochemical (European Patent Application Publication No. 417305A1, hereinafter "Idemitsu").

Applicant notes that Claims 3-5 depend from independent Claim 1. Accordingly, for at least the reasons set forth above with respect to Claim 1, Applicant submits that Claims 3-5 also define subject matter which is patentable over the art of record.

Applicant notes that Claim 7, as presented herein, includes among other features a method performed in connection with "an optical disc that includes a first layer which includes a surface impressed with optically readable structures that have encoded speed information and focus control information which are coated with a first reflective layer", with the method including the act of "focusing the beam on the first reflective layer". Applicant submits that there is neither any teaching nor suggestion in either Gordon or Idemitsu as to a disc which includes such features as focus control information, or the act of "focusing the beam on the first reflective layer". No such focusing activity is either taught or suggested by Gordon or Idemitsu, taken alone or in combination. Accordingly, Applicant respectfully submits that Claim 7 defines subject matter which is patentable over the art of record. Furthermore, since Claims 8-16 and 19-22 depend from Claim 7, Applicant respectfully submits that these dependent Claims also define subject matter which is patentable over the art of record for at least the reasons set forth with respect to Claim 7.

With reference to Claim 37, as presented herein, Applicant notes that the method includes the act of "generating from the first detector operational signals which enable the optical disc reader to track said optical readable structures, control focus of said beam, and rotate the optical

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disc ...” (emphasis added). Applicant respectfully submits that neither Gordon nor Idemitsu teach or make obvious at least the step in Claim 37 noted herein, in combination with the other steps of that claim. Accordingly, Applicant respectfully submits that Claim 37 also defines subject matter which is patentable over the art of record.

Claims 26 and 27 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gordon in view of Daiber (U.S. Patent No. 6,222,933 B1, hereinafter “Daiber”).

With regard to Claim 26, as presented herein, that claim defines a method which includes, among other features, the step of:

“generating from said acquired radiation operational signals which enable the optical disc reader to track said encoded trackable features in an image plane of the hologram, wherein at least part of the analyte is located within the image plane of the hologram” (emphasis added).

Applicant respectfully submits that neither Gordon nor Daiber teach or make obvious the method steps, including the limitation described herein, of Claim 26. Accordingly, Applicant respectfully submits that Claim 26 defines subject matter which is patentable over the art of record. Furthermore, since Claim 27 depends from Claim 26, Applicant respectfully submits that it also defines patentable subject matter for at least the reasons set forth above with respect to Claim 26.

Claims 28-29 and 32-34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Gordon and Daiber and further in view of Idemitsu. Applicant respectfully submits that since Claims 28-29 and 32-34 each depend from Claim 26, these dependant claims also define subject matter which is patentable over the art of record for at least the reasons set forth above with reference to Claim 26.

Claims 6, 17, 18, 23, 25, 30, 31, 35 and 36 were objected to as being dependent on a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The status of these claims, as presented herein, will be discussed below.

Claim 6 has been amended to place it into independent form, and to include the limitations of Claim 1, from which it previously depended. The limitations of Claim 3, from which it also depended, were not incorporated since Applicant submits that those limitations are unnecessary in order to define subject matter which is patentable over the art of record.

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Accordingly, Applicant respectfully submits that Claim 6 now defines subject matter which is patentable over the art of record.

Claim 17 has been amended by this paper to depend from Claim 7, which itself was amended to include the limitation that the optical disc includes encoded focus control information. Thus, Applicant submits that Claim 17 continues to define patentable subject matter for at least the reasons set forth above with respect to Claim 7. Furthermore, since Claim 18 depends from Claim 17, Applicant submits that it also defines subject matter which is patentable over the art of record.

Claim 23 has been amended by this paper to include the limitations of Claims 1 and 7 from which it previously depended. It does not, however, incorporate the limitations of Claim 3, from which it also previously depended, since Applicant submits that the limitations of Claim 3 are not necessary in order for this claim to define subject matter which is patentable over the art of record. Accordingly, Applicant respectfully submits that Claim 23, as presented herein, defines subject matter which is patentable over the art of record. Since Claim 24 depends from Claim 23, Applicant submits that Claim 24 also defines subject matter which is patentable over the art of record.

Claim 25 has been amended by this paper to include the limitations of Claims 1 and 3 from which it previously depended. Accordingly, Applicant submits that Claim 25 defines subject matter which is patentable over the art of record.

Claim 30 has been canceled by this paper, and Claim 31 has been amended to include the limitations of Claim 26, from which it previously depended. The limitations of Claims 28 and 29, from which Claim 31 also previously depended, have not been included in Claim 31 as presented herein. Applicant submits that the limitations of Claims 28 and 29 are not necessary in order for Claim 31 to define patentable subject matter. Accordingly, Applicant respectfully submits that Claim 31, as presented herein, defines subject matter which is patentable over the art of record.

Claim 35 has been amended to include the limitations of Claim 26, from which it previously depended. However, the limitations of Claim 28, from which Claim 35 also depended, have not been included in Claim 35 as presented herein. Applicant submits that the limitations of Claim 28 are not necessary for Claim 35 to define patentable subject matter.

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Accordingly, Applicant respectfully submits that Claim 35 now defines subject matter which is patentable over the art of record.

Claim 36 has been amended to include the limitations of Claim 26, from which it previously depended. However, the limitations of Claim 28, from which Claim 36 also previously depended, have not been included in Claim 36 as presented herein. Applicant submits that the limitations of Claim 28 are not necessary for Claim 36 to define patentable subject matter. Accordingly, Applicant respectfully submits that Claim 36, as presented herein, defines subject matter which is patentable over the art of record.

New Claims 39-41 have been added by this paper, to more fully define subject matter which is patentable over the art of record. Claim 39 includes a method for detecting at least one analyte held by an optical disc having embedded focus control information and includes the acts of "reading the focus control information; and directing a movement of the beam's focal point in response to the focus control information." Claim 40 depends from Claim 39, and includes a further limitation wherein the disc has encoded assay information and the method includes the step of "reading said assay information and conducting the assay on the analyte". Claim 41 defines a method for detecting at least one analyte held by an optical disc, including the step of "generating from said acquired radiation at least one analyte signal comprising a focusing servo signal that is indicative of the presence of the analyte;". Applicant respectfully submit that these features, along with others set forth in Claims 39-41, define subject matter which is patentable over the art of record.

In the Office Action mailed February 9, 2005, Claim 38 was originally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over Claim 1 of copending Application No. 10/005,313. The Examiner notes that this is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Applicant notes that Claim 38 has been amended herein, and submits that this claim now defines subject matter which is patentably distinct from Claim 1 of Application No. 10/005,313, thus overcoming the obviousness-type double patenting rejection. Nevertheless, if it is ultimately determined that this double patenting rejection continues to apply, Applicant will submit a Terminal Disclaimer at the appropriate time. However, Applicant believes that such Terminal

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Disclaimer will be unnecessary since the amendment of Claim 38 has overcome the basis for this rejection.

In view of the foregoing, Applicant respectfully submits that Claims 1-29 and 31-41, as presented herein, define subject matter that is patentable over the art of record. Accordingly, Applicant respectfully submits that Claims 1-29 and 31-41 are now in condition for immediate allowance and such prompt allowance of the same is respectfully requested.

CONCLUSION

The Applicant has endeavored to address all of the concerns of the Examiner in view of the recent Office Action directed to the above-identified application. Accordingly, amendments to the claims, the reasons therefor and arguments in support of the patentability of the pending claims are presented above.

The specific changes to the specification and the amended claims are shown in the above section entitled IN THE CLAIMS. On this set of pages, the insertions are underlined while the ~~deletions are stricken through~~.

Any claim amendments which are not specifically discussed in the above remarks are not made for patentability purposes, and it is believed that the claims would satisfy the statutory requirements for patentability without the entry of such amendments. Rather, these amendments have only been made to increase claim readability, to improve grammar, and to reduce the time and effort required of those in the art to clearly understand the scope of the claim language. Any new claims presented above are of course intended to avoid the prior art, but are not intended as replacements or substitutes for any cancelled claims. They are simply additional specific statements of inventive concepts described in the application as originally filed.

In light of the above amendments and remarks, reconsideration and withdrawal of the outstanding rejections is specifically requested. If the Examiner finds any remaining impediment to the prompt allowance of these claims that could be clarified with a telephone conference, the Examiner is respectfully requested to initiate the same with the undersigned.

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Please charge any additional fees, including any fees for additional extension of time, or credit overpayment to Deposit Account No. 11-1410.

Respectfully submitted,

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